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1982

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EADS LIQUID EFFLUENTS DATA SYSTEM
1982 ANNUAL REPORT

by

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ABSTRACT

This report is the first data summary of wastewater sampling and analysis results compiled in the Liquid Effluents Data System (LEDS). The LEDS is a component of a group of interrelated computerized data bases named the Environmental Assessment Data Systems (EADS) which describe multimedia discharges from energy systems and industrial processes. The EADS was designed to aid researchers in environmental assessment, source characterization, and control technology development. This report summarizes the data compilation from the implementation of the LEuS in 1980 through 1982. It lists the sources reported in the LEDS, feed materials used, chemical analysis data on hazardous and priority pollutants, and the number of samples for each sources.

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SECTION 1

INTRODUCTION

The Liquid Effluents Data System (LEDS) is a computerized information system that contains the results of sampling and analysis activities performed on wastewater discharges from energy systems and industrial processes. The LEDS is one of four waste stream data bases which make up the Environmental Assessment Data Systems (EADS).¹ The LEDS became operational in June 1980. This annual report describes the LEDS and its growth, contents, and future within the EADS.

The EADS is a comprehensive system of computerized data bases that describe energy systems, industrial processes, control technologies, and process discharges. Moreover, the EADS is a protocol for data analysis and evaluation that allows users to make consistent and meaningful interpretations of the data collected and reported. The EADS protocol may be applied to any type of sampling and analysis activity in which discrete samples are collected.

The EADS is composed of four operational data bases for multimedia product, process, or waste streams sampled and analyzed, that are supported by a variety of reference data bases and data evaluation programs. This is shown in Figure 1. The four sampling and analysis data bases now in operation are the Fine Particle Emissions Information System (FPEIS), the Gaseous Emissions Data System (GEDS), the Liquid Effluents Data System (LEDS), and the Solid Discharge Data System (SDDS).

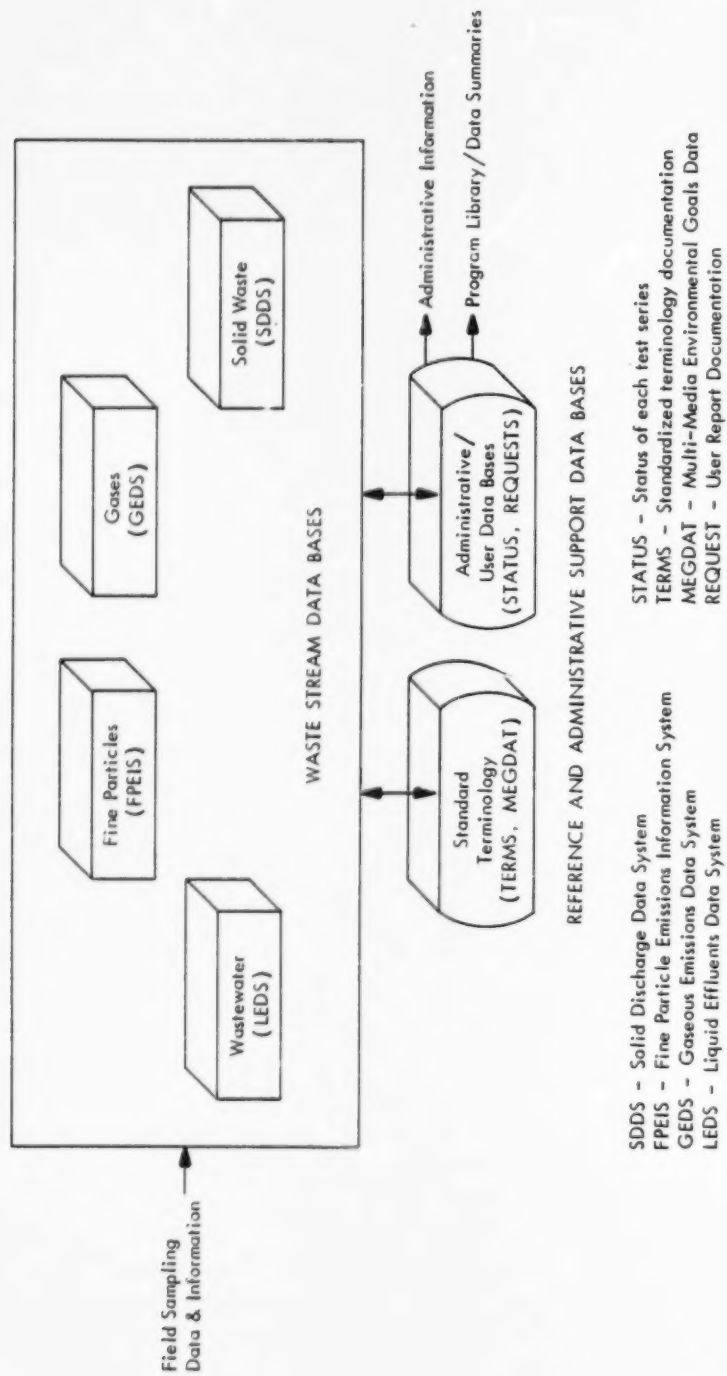


Figure 1. Components of the Environmental Assessment Data Systems.

Each data base contains extensive information on the source of the discharges, on applied control technologies, on fuels or feedstocks, and on the composition of each discharge. The EADS is applicable to most sources, including industrial processes, energy systems, and wastewater treatment plants. The structure of the EADS and the types of data contained in the EADS are discussed in Section 2.

The vast and growing volume of sampling and analysis data produced by EPA, its contractors, and other agencies required a mechanism to consolidate such data. These organizations have produced and still are producing a broad range of data from a variety of industrial and energy sources, and sampling and analysis methods and protocols are constantly evolving. The EADS was created to provide a comprehensive and diverse repository for multimedia environmental sampling and analysis data and to consolidate the data in a central location where they can be readily available to the user community. To meet this provision, the EADS was designed to accommodate a variety of multimedia data from assorted sampling and analysis programs.

One of the requirements of an environmental data base was that a consistent format be used in order to facilitate accurate, reliable data assessments. More specifically, it was essential that data be reported in similar units and be compiled with consistency in engineering conditions, technical bases, etc. To meet this need, the EADS was developed to provide a standardized and uniform protocol for reporting sampling and analysis data.

A critical need existed for current information and standardized data analysis procedures. Thus, the EADS was created to supply current sampling and analysis data for evaluation and to provide standard methods for the retrieval and analysis of the data. The LEDS, for example, has been useful to the Office of Research and Development in the development of the Wastewater Treatability Manual. The EADS is constantly being updated and expanded, and there is a Program Library to aid users in their data evaluation needs through the utilization of standard reports and analysis software.

Finally, and possibly most important, the EADS was created to document the quality of the data reported. EPA is committed to producing environmental data of high quality and to providing a cost-effective means for documenting the results of sampling and analysis programs so that data quality may be determined. The EADS is an integral component of IERL/RTP's approved Quality Assurance (QA) Program Plan and contains specific QA parameters to aid interpretation of the data by the user. The broad applicability and comprehensiveness of the EADS make it particularly suitable for a QA documentation role.

Data from the EADS have been used to model process engineering emissions, to design and evaluate control technology, and for many other applications. Because of the sensitive nature of some stationary source emissions data, EADS provides a special feature which is designed to protect confidential or proprietary source data. If this feature is utilized, EPA will have no knowledge whatsoever of the identity of the source. This feature enables the EADS to obtain, store, and use multimedia emissions data that would otherwise be unavailable. Confidentiality has already been used extensively and has been a great aid in obtaining data which probably would not have been available otherwise.

The EADS is designed as a user-oriented system. A LEADS User Guide⁴ is available documenting instructions for data encoding and submittal, along with methods for data retrieval. Use of the LEADS data system analysis software is described in the LEADS User Guide. Revisions to the documentation are made easily, and supplements are issued as needed.

The EADS Program Library contains an extensive array of user programs, including special reports and computations. Data can be retrieved according to source control technology, sample methods, or other criteria. Data can be requested for the entire EADS or for any of the data bases within the EADS. Specially designed routines are available to interface with statistical packages and to present the data in a variety of output formats. For example, the FPEIS data base has a program called PArticle Data

REduction (PADRE), which calculates particle distributions from user-supplied stage weights/concentrations and cut diameters, and stores the results in the FPEIS. These programs are designed to assist the user in obtaining useful and meaningful data in a variety of forms.

The EADS is available at EPA's National Computer Center (NCC) at Research Triangle Park, North Carolina, on the UNIVAC U-1100 computer. The EADS can be accessed directly on the computer by any user who meets the accounting requirements of the NCC or by written or verbal request to the EADS technical support staff.

A key component of the design effort for the EADS data bases is flexibility. User needs will change, and the EADS is capable of adapting to these changes in order to remain a useful information resource. The EADS has undergone several improvements since it became operational in 1980 and will undergo additional changes as needed. The EADS is still the only sampling and analysis and engineering data system available today that is completely integrated across media boundaries.

SECTION 2

DESCRIPTION OF THE LEDS DATA BASE

The LEDS data base contains industrial or energy process source emissions test data and related source and control system design and operating data. It describes the liquid effluents at the point where the liquid sample is collected from the discharge stream. This is accomplished through a flexible data base structure and in the definitions of the principal data types that are reported. Data types are defined as data elements, each data element describing a particular piece of information, such as a source characteristic, discharge stream characteristic, control device or treatment process, source operation, test information, analyses of the fuels and feedstocks, sampling activity information, chemical analyses, radionuclide analysis, or bioassay result. The data elements collectively describe the entire source test activity. The LEDS may contain more than 500 discrete data elements for each site test activity reported. The extent (or completeness) of the data contained in the data base depends on the objectives of the specific site test plan.

DATA BASE DIFFERENCES

Before the LEDS is described in detail, it should be noted that the four waste stream data bases (FPEIS, GEDS, LEDS, and SDDS) have the same structure, but due to differences in media, the elements are not always identical. Each data base was designed to be compatible with the sampling and analysis methods specific to the medium that it covers, while retaining structural similarities with the other media for efficient cross-linking for multimedia sampling analysis reporting.

Each data base contains a cross-reference to those other data bases containing data from the same source at the same point in time. This cross reference is in the form of a test series number (TSN). Thus, a LEDS file might contain the FPEIS, SDDS, and GEDS test series numbers as cross-references. In the same manner, test series in the other media might contain a cross-reference to the LEDS data base. A summary of the multimedia data currently found in the LEDS is given in Appendix A.

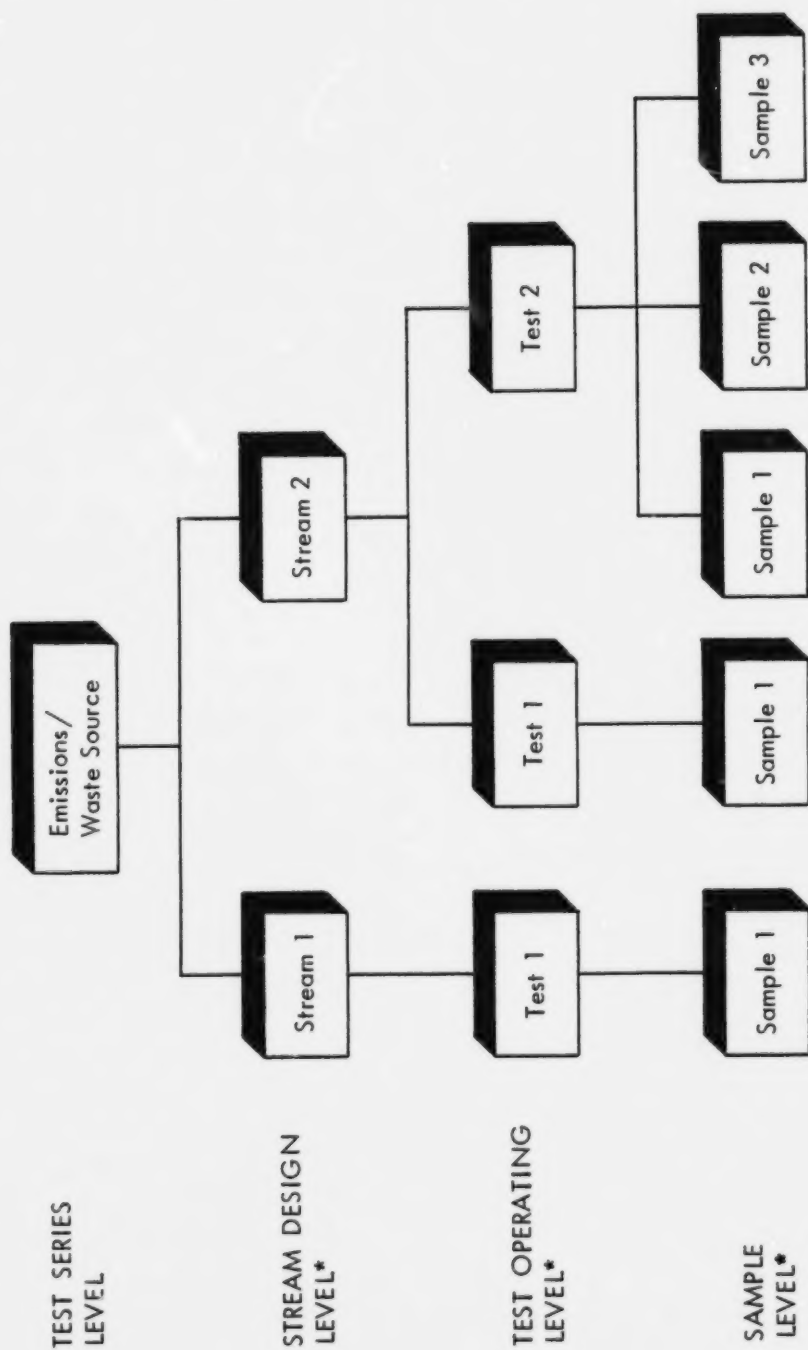
LEDS DESIGN

From an organizational standpoint, the EADS/LEDS data elements are grouped into four levels: the test series level, the stream design level, the test operating level, and the sample level. This structure is shown in Figure 2. The data elements are arranged with general information at the uppermost level to specific results found at the lowermost level.

The term test series level is used to designate the uppermost level data base structure. This is where source description data are contained. A test series describes the sampling activities performed at a single site over a specific period of time. Each test series is assigned a unique test series number which can always be used to identify those data.

Below the test series level is the stream design level. Here, each waste stream that has been sampled is fully described, including control device design parameters. As shown in Figure 2, a test series may have multiple streams.

Below the stream design level is the test operating level. As the name implies, operating data for each test are defined here. Source process conditions, as well as operating mode and control device operating data, are reported. The fuels and feedstocks to the process are also completely characterized. A test is defined broadly as a set of various types of samples taken to characterize a liquid effluent stream under one set of source and control device operating conditions. Again, from Figure 2, there may be



*Multiple Streams, Tests, and Samples indicated to show flexibility of EADS to handle multiples at these levels.

Figure 2. EADS/LEDS organization.

multiple operating conditions of the source under which samples may be collected from the same stream.

The lowermost and most fundamental level of the data base is the sample level. This level describes the collection and subsequent analysis of each discrete sample collected, including measurement equipment or method particulars, measured stream conditions at the sampling location, and complete physical, chemical, radionuclide, and bioassay data.

This sample level contains a component feature that permits reporting with respect to a measurement instrument or method component. The LEDS is designed to accommodate the data in any arrangement by allowing the components of the sampling method to be defined according to the needs of the test or analysis.

DATA BASE STRUCTURE

The major categories of data within each level of the data base are given in Figure 3. The data are grouped into the following general categories: general source description and related information; design conditions and parameters of the effluent stream and of the control device or treatment/storage/recovery process; test operating information including analysis of any fuels and feedstock; and sampling activities information including chemical, physical, radionuclide, and biological analysis results.

Source Descriptions

The EADS Source Classification System³ provides standard terms to enable the general grouping of sources and to facilitate computer searches. In order to provide a cross-reference to other government data systems, the source description includes the Standard Industrial Classification (SIC)⁴ code as defined by the U.S. Department of Commerce.

The name of the testing organization and the reference (report, journal article, etc.) from which the data have been extracted are included in this

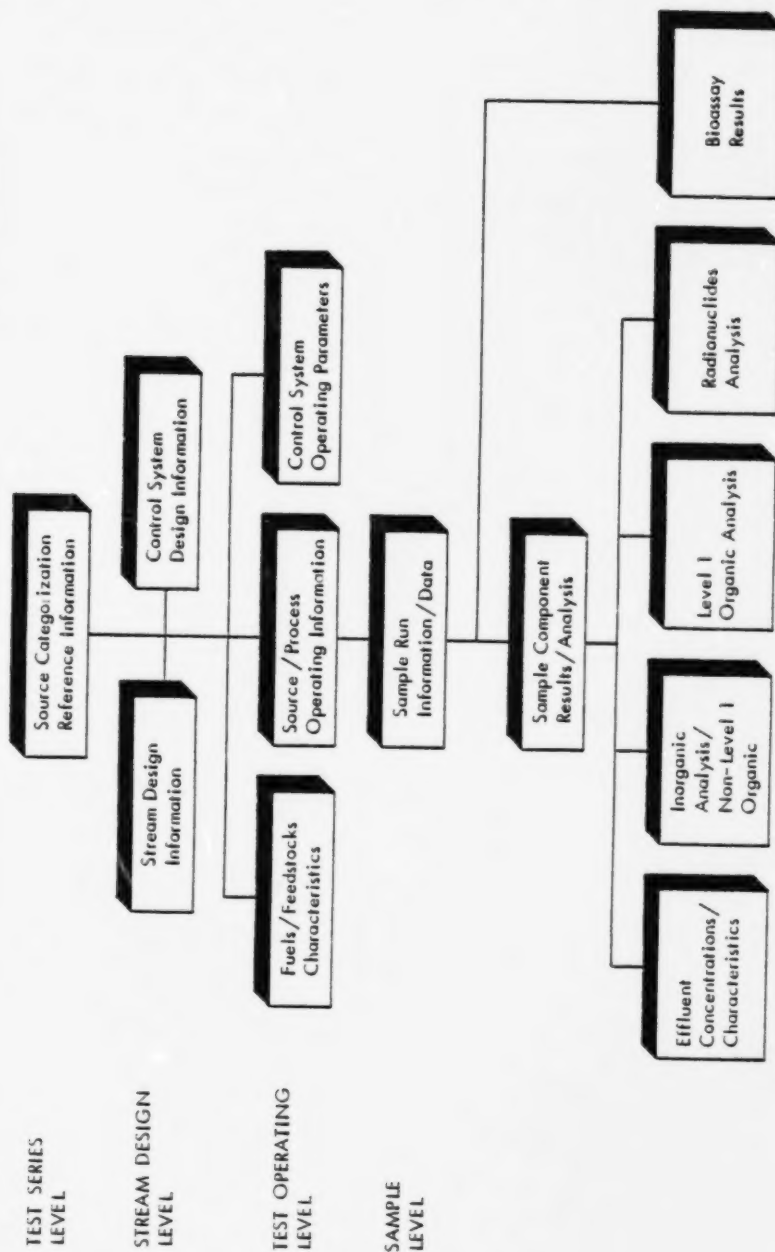


Figure 3. LEDs structure.

category. Additionally, comments or data may be included which may be pertinent to the test series but for which a specific data element is not available. An abstract of the test activity is included to provide a general description of the test series. Indications of the quality of the data are also contained at the test series level. This includes references to availability of test plans and QA plans.

Stream Design Characteristics

The design conditions of the effluent stream at a sampling location are described at this category. For example, data on flow rate, temperature, and pressure may be repeated here. This design information should remain constant from test to test unless the control technology or stream itself is altered in some way.

Control Device Design Characteristics

This category contains design information and descriptions of any control or treatment technology for the test series. Information provided includes commercial name, manufacturer, or other items to characterize the control technology. Available design parameters are included to provide additional characterization.

Test Identification

This category provides actual operating conditions of the source process and any control technology. The information includes test data and times and operating conditions of the source, such as plant output or amount of fuel used. Actual operating characteristics of the control technology, such as pressure drops, are provided.

Fuels and Feedstock Characteristics

This category includes data describing all fuels and feedstocks that are inputs to the process being tested. This can help to provide a comprehensive

assessment of the material balances on a source. The LEDS contains data on the consumption rate and type of fuel or feedstock and general characteristics such as physical parameters. In addition to an ultimate and proximate analysis of the fuels consumed in a process, LEDS is designed to accept inorganic and organic chemical analysis data.

Sampling Activity Description

This category contains information that describes the individual sampling activity. Information about the sample method and activity is provided, including measurement instrument type and name, measurement flows, and temperatures. Actual stream conditions, as measured at the sampling location, can be provided. In addition, the sampling location itself can be described so that its location with respect to a single control or treatment process is clear, as well as its location with respect to a total system or group of control processes.

Component Description

Frequently, a sample will contain two or more components, each of which is analyzed separately. This category is provided to describe each component individually and report results obtained from the analysis on each component. Regardless of the number of components making up a measurement instrument or sample, this category describes all the chemical, physical, biological, and radionuclide results available, including conventional pollutant parameters such as TSS, BOD, etc. A description follows of the types of analyses available at this category.

Inorganic/Non-Level 1 or 2 Organic Analysis

The LEDS is designed to accept all inorganic results and organic results that do not conform to Level 1 or 2 protocols⁵; that is, species-specific organic results. Results of the inorganic or non-Level 1 or 2 analysis are typically presented as the identification of the species analyzed and the actual source concentration as contributed by each component.

The LEDS recognizes the existence of a variety of coding systems for identifying chemical species and compounds. Users are able to use two chemical identification schemes, the Chemical Abstract Services (CAS) registration numbers and the Multimedia Environmental Goals (MEG)⁶ numbers.

Level 1 or 2 Organic Analysis

Level 1 or 2 organic analyses require special reporting formats due to the mix of qualitative and semiquantitative results from analyses such as liquid chromatography fractionation and low resolution mass spectroscopy (LRMS). The purpose of this type of analysis is to identify the major classes of organic compounds in a process effluent stream and to estimate their concentrations. Special provisions have been included to accommodate the organic species reporting protocol of a Level 1 or 2 environmental assessment sampling and analysis program. Gas chromatography data are also available under the Level 1 protocol.

Radionuclide Analysis

When available, the LEDS can accept and report radionuclide data results. Actual source concentrations of radionuclides are presented as picocuries per liter (pCi/L).

Bioassay

Biological indicators are sometimes coupled with chemical tests to assess more accurately the hazard potential of process effluent streams. The Level 1 screening phase uses a series of short-term bioassays to detect acute biological effects. Bioassays may be either health-related or ecology-related. The LEDS reports results in terms of concentrations, mutagenicity, toxicity levels.

SECTION 3

DATA SUMMARY

The LEDS data base is similar in size to GEDS in terms of numbers of samples (approximately 450 samples), although the LEDS contains twice the number of test series as the GEDS contains. This is probably due to a decreased need in liquid sampling, as opposed to gaseous sampling, for repetitive samples. Liquid effluent sampling is typically grab type. The rate of growth of the LEDS will increase significantly in the future as emphasis at the Federal and state levels shifts from air pollution to toxic and hazardous waste problems. Toxic and hazardous waste sampling typically involves either the liquid or solid media. A complete list of test series in the LEDS and their source category identifiers is given in Appendix B.

LEDS DATA SUMMARY

The LEDS data are characterized by variety in the source categories, in the control device/treatment systems, and in the compounds analyzed. The data base contains information on conventional wastewater pollutants and nonconventional inorganic and organic compounds. Table 1 summarizes the source categories, and Table 2 summarizes the control device/treatment system data available in the LEDS. About half of the test series have been conducted on effluent streams from the metals source category, primarily in ore mining and dressing and primary ferrous sources. The remainder of the test series is in the chemical manufacturing, combustion, consumer products, and incineration source categories. Where possible, terminology consistent with that used by the EPA Office of Water is utilized in the LEDS. Control device/treatment systems are represented by approximately 15 generic processes and over 25 specific treatment process types.

TABLE 1. SUMMARY OF SOURCE CATEGORIES IN LEDS

ENVIRONMENTAL ASSESSMENT DATA SYSTEMS
SOURCE CATEGORY SUMMARY

SOURCE CATEGORY	SOURCE TYPE	PRODUCT OR DEVICE	PROCESS TYPE	SIC	NUMBER OF TEST SERIES	NUMBER OF SAMPLES
CHEMICAL MANUFAC	GUM & WOOD	OILS	EXTRACTION/FRACTION	2841	5	15
CHEMICAL MANUFAC	PHARMACEUTICALS	NOT SPECIFIED	NOT SPECIFIED	2834	9	18
CHEMICAL MANUFAC	SURFACE COATING	PAINTS	LATEX PAINT MFG	2816	11	33
CHEMICAL MANUFAC	SURFACE COATING	PAINTS	LATEX/OIL MIX PAINTS	2816	1	3
CHEMICAL MANUFAC	SURFACE COATING	PAINTS	OIL PAINT MFG	2816	2	6
CHEMICAL MANUFAC	SYNTHETIC RUBBER	MISC PRODUCTS	POLYMERIZATION PROC	2822	5	10
COAL MINING	BITUMINOUS & LIGNITE	BITUMINOUS	PHYS-MECH CLEANING	1211	3	6
COAL MINING	MISC COALS	NOT SPECIFIED	MINING	1200	7	19
COMBUST-ENERGY	COMMERCIAL-INST	INCINERATORS	MULTIPLE CHAMBER	4953	1	8
COMBUST-ENERGY	INDUSTRIAL	GASIFICATION	ENTRAINED BED	4960	1	4
COMBUST-ENERGY	UTILITY	BOILER	CYCLONE	4911	5	17
COMBUST-ENERGY	UTILITY	BOILER	HORIZ OPPOSED WALL	4911	1	3
COMBUST-ENERGY	UTILITY	BOILER	SINGLE WALL	4911	5	13
COMBUST-ENERGY	UTILITY	BOILER	STOKER	4911	2	2
COMBUST-ENERGY	UTILITY	BOILER	TANGENTIAL	4911	6	10
CONSUMER SERVICES	LAUNDRIES	AUTOMOBILES	ROLLOVER	7542	2	7
CONSUMER SERVICES	LAUNDRIES	AUTOMOBILES	TUNNEL	7542	1	4
CONSUMER SERVICES	LAUNDRIES	AUTOMOBILES	WAND	7542	2	7
CONSUMER SERVICES	LAUNDRIES	OTHER	COMMERCIAL	7210	6	24
CONSUMER SERVICES	LAUNDRIES	OTHER	INDUSTRIAL	7210	8	28
FABRICATED MTL PROD	METAL PRODUCTS	APPLIANCES	SURFACE COATING	3449	7	14
LEATHER PRODUCTS	TANNING/FINISHING	CURED LEATHER GOODS	NOT SPECIFIED	3111	7	14
METAL MINING	ORE MINE & DRESSING	RAUXITE	MINE	1051	1	2
METAL MINING	ORE MINE & DRESSING	COFFER	MINE/MILL	1021	2	7
METAL MINING	ORE MINE & DRESSING	FERROALLOY	MINE/MILL	1041	3	8
METAL MINING	ORE MINE & DRESSING	IRON	MINE	1011	1	2
METAL MINING	ORE MINE & DRESSING	IRON	MINE/MILL	1011	1	2
METAL MINING	ORE MINE & DRESSING	LEAD	MINE/MILL	1031	1	4
METAL MINING	ORE MINE & DRESSING	LEAD/ZINC	MINE/MILL	1031	3	8
METAL MINING	ORE MINE & DRESSING	SILVER	MINE/MILL	1042	1	4
METAL MINING	ORE MINE & DRESSING	TITANIUM	MINE/MILL	1099	1	3
METAL MINING	ORE MINE & DRESSING	URANIUM	MILL	1094	1	2
METAL MINING	ORE MINE & DRESSING	URANIUM	MINE	1094	2	4
METALS	PRIMARY FERROUS	COKE	COKE OVEN	3312	1	2
METALS	PRIMARY FERROUS	IRON	FOUNDRY/CASTING	3320	4	16
METALS	PRIMARY FERROUS	IRON	SINTERING	3320	3	6

(continued)

PRINT-001

DATA BASE: LED9

WHERE CLAUSE FOLLOWS:
WH C355 LT 01/01/83

TABLE 1. (continued)

ENVIRONMENTAL ASSESSMENT DATA SYSTEMS
SOURCE CATEGORY SUMMARY

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DATE: 05/02/83

SOURCE CATEGORY	SOURCE TYPE	PRODUCT OR DEVICE	PROCESS TYPE	SIC	NUMBER OF TEST SERIES	NUMBER OF SAMPLES
METALS	PRIMARY FERROUS	STEEL	ALKALINE CLEANING	3312	3	6
METALS	PRIMARY FERROUS	STEEL	BASIC OXYGEN FURNACE	3312	6	12
METALS	PRIMARY FERROUS	STEEL	COATING	3312	4	8
METALS	PRIMARY FERROUS	STEEL	COLD ROLLING	3312	3	6
METALS	PRIMARY FERROUS	STEEL	ELECTRIC ARC FURNACE	3312	4	8
METALS	PRIMARY FERROUS	STEEL	HOT COATING	3312	3	6
METALS	PRIMARY FERROUS	STEEL	HOT FORMING	3312	2	4
METALS	PRIMARY FERROUS	STEEL	OPEN HEARTH	3312	3	6
METALS	PRIMARY FERROUS	STEEL	PIPE & TUBE PROD	3312	1	2
METALS	PRIMARY FERROUS	STEEL	SCARFING	3312	3	6
METALS	PRIMARY FERROUS	STEEL	VACUUM DEGASSING	3312	2	4
METALS	PRIMARY FERROUS	ALUMINUM	FOUNDRY/CASTING	3334	3	6
METALS	PRIMARY NONFERROUS	COPPER	FOUNDRY/CASTING	3331	1	2
TEXTILES & PRODUCTS	DYEING & FINISHING	BLENDED FABRIC	FINISHING	2264	12	24
TEXTILES & PRODUCTS	DYEING & FINISHING	POLYESTER FABRIC	FINISHING	2262	2	4
TEXTILES & PRODUCTS	DYEING & FINISHING	WOOL	FINISHING	2269	1	2

TABLE 2. SUMMARY OF CONTROL DEVICE/TREATMENT SYSTEMS IN LEDS

Generic name	Design type	Specific process type	Number of test series
Adsorption	Activated carbon processes	Not specified	3
Biological processes	Not specified	Not specified	1
Biological processes	Not specified	Not specified	1
Biological processes	Activated sludge	Extended aeration	17
Biological processes	Activated sludge	Not specified	13
Biological processes	Aerated lagoons	Not specified	1
Biological processes	Aerated lagoons	Not specified	4
Biological processes	Facultative pond/lagoon	Equalization	1
Biological processes	Facultative pond/lagoon	Multipond	2
Biological processes	Facultative pond/lagoon	Not specified	1
Centrifugation	Hydrocyclones	Hydrocyclone	2
Centrifugation	Hydrocyclones	Not specified	2
Coagulation	Chemical coagulants	Iron salts	2
Evaporation	Ponds and lagoons	Not specified	1
Filtration	Drum filters	Belt type	1
Filtration	Filtration processes	Not specified	1
Filtration	Granular bed filters	Deep bed	2
Filtration	Not specified	Not specified	3
Flocculation	Polyelectrolyte flocculants	Not specified	2
Flotation	Not specified	Not specified	1
Flotation	Dissolved air units	Not specified	1
Flotation	Flotation conditioners	Promoters	10
Foam fractionation	Not specified	Not specified	1
Membrane processes	Ultrafiltration	Not specified	1
Membrane processes	Ultrafiltration	Tube-type	2
None	Not specified	Not specified	37
Not specified	Not specified	Not specified	7
Not specified	Not specified	Not specified	1

(continued)

TABLE 2. (continued)

Generic name	Design type	Specific process type	Number of test series
Oil separation/remov	Oil skimmers	Not specified	1
Oxid/reduct/process	Chemical oxidation/reduction	Not specified	1
Precip/coagulation	Chemical precipitation	Alum	9
Precip/coagulation	Chemical precipitation	Not specified	2
Precip/coagulation	Chemical precip/coagulation	Not specified	1
Precip/coagulation	Coagulation	Barium chloride	3
Precip coagulation	Coagulation	Iron chloride	1
Precip/coagulation	Coagulation	Lime	8
Precip/coagulation	Coagulation	Not specified	2
Precip/coagulation	Coagulation	Polymer	12
Settling	Not specified	Not specified	3
Settling	Not specified	Settling pond	1
Settling	Clarifiers	Not specified	1
Settling	Clarifiers	Not specified	3
Settling	Classifiers	Not specified	1
Settling	Conventional clarifiers	Not specified	1
Settling	Conventional clarifiers	Not specified	5
Settling	Conventional clarifiers	Rectangle clarifiers	1
Settling	Not specified	Not specified	2
Settling	Ponds/lagoons	Facultative	1
Settling	Sand filtering	Not specified	1
Settling	Sediment channels	Batch settling tank	1
Settling	Sediment channels	Earthen-wall basin	1
Settling	Sediment channels	Not specified	1
Settling	Sediment channels	Settling pond	21
Settling	Settlers	Lamella Grav settler	2
Settling	Settlers	Tube settler	1
Settling	Settling cones	Not specified	1
Settling	Thickeners	Not specified	10

CHEMICAL DATA SUMMARY

The EADS Program Library includes user programs that retrieve data in summary form. Table 3 summarizes water priority pollutants found in the LEDS. Table 4 lists the pollutants designated as hazardous under the RCRA which may be found in the LEDS. Those listings serve as examples of summaries available; other selection possibilities may include drinking water standards, potential water criteria, and other regulated compound lists which may be of interest. These programs are also capable of providing the minimum, maximum, mean, median, and standard deviation of chemical pollutant concentrations for selected source category/treatment system combinations.

TABLE 3. WATER PRIORITY POLLUTANTS IN LEDS

Pollutant preferred name	Number of test series	Number of samples
Acenaphthene	7	7
Acenaphthylene	8	8
Aldrin	3	3
Anthracene	6	7
Antimony	46	53
Arsenic	33	41
Benzene	31	31
Benzo(a)pyrene	9	9
Banzo(k)fluoranthene	2	2
Benz(a)anthracene	7	7
Beryllium	6	6
Bromodichloromethane	4	4
Butyl benzyl phthalate	18	18
Cadmium	39	44
Carbon tetrachloride	10	10
Chlordane	2	2
Chlorobenzene	10	10
Chloroform (Trichloromethane)	66	67
Chromium	96	101
Chromium - free and combined	1	1
Chrysene	11	12
Copper	112	126
Copper - free and combined	1	1
Cyanide ion	3	4
Dibenz(a,h)anthracene	1	1
Diethyl phthalate	8	8
Dimethyl phthalate	8	8
Di-n-butyl phthalate	31	32
Di-n-octyl phthalate	9	9
Di-2-ethylhexyl phthalate	65	68
Ethyl benzene	26	27
Ethyl chloride	1	1
Fluoranthene	16	16
Fluorene	10	10
Heptachlor	2	2
Isophorone	2	2
Lead - free and combined	78	86
Lindane	2	2
Mercury - free and combined	43	47

(continued)

TABLE 3. (continued)

Pollutant preferred name	Number of test series	Number of samples
Methyl chloride	3	3
Methylene chloride (dichloromethane)	49	50
Naphthalene	23	23
Nickel	78	85
Nitrobenzene	2	2
N-nitrosodipropylamine	1	1
Pentachlorophenol	18	18
Phenanthrene	12	13
Phenol	52	55
Pyrene	17	18
Selenium	27	28
Silver	20	22
Tetrachloroethene	16	16
Thallium	9	9
Toxaphene	1	1
Trans-1,2,-dichloroethene	5	5
Trans-1,3-dichloropropene	1	1
Trichlorofluoromethane	6	6
Zinc	125	141
1,1-Dichloroethene	3	3
1,1,1-Trichloroethane	19	20
1,1,2-Trichloroethane	1	1
1,1,2,2,Tetrachloroethane	1	1
1,2-Dichlorobenzene	5	5
1,2-Dichloroethane (ethylene chloride)	4	4
1,2-Dichloropropane	2	2
1,2-Diphenylhydrazine	2	2
1,2,4-Trichlorobenzene	3	3
1,3-Dichlorobenzene	1	1
1,4-Dichlorobenzene	3	3
2-Chloronaphthalene	3	4
2-Chlorophenol	4	4
2-Nitrophenol	6	6
2,2'-Dichlorodiisopropyl ether	1	1
2,4-Dichlorophenol	9	9
2,4-Dinitrophenol	2	2
2,4-Xylenol	5	5
4-Nitrophenol	1	1
4,6-Dinitro-o-cresol	6	6

TABLE 4. RCRA HAZARDOUS WASTE POLLUTANTS IN LIDS

Pollutant preferred name	Number of test series	Number of samples
Benzene	31	31
Benzo(a)pyrene	9	9
Benz(a)anthracene	7	7
Beryllium	6	6
Chlorobenzene	10	10
Chloroform (trichloromethane)	67	68
Chrysene	11	12
Cyanide ion	71	76
Dibenz(a,h)anthracene	1	1
Diethyl phthalate	8	8
Dimethyl phthalate	8	8
Di-n-butyl phthalate	1	1
Di-n-octyl phthalate	9	9
Di-2-ethylhexyl phthalate	65	68
Fluoranthene	16	16
Fluorine	1	1
Mercury	42	46
Mercury - free and combined	1	1
Methyl chloride	3	3
Methylene chloride (dichloromethane)	50	51
Naphthalene	23	23
Nitrobenzene	2	2
N-nitrosodiethylamine	3	3
N-nitrosodipropylamine	1	1
Pentachlorophenol	19	19
Phenol	52	55
Tetrachloroethene	1	1
Toluene	53	54
Trichlorofluoromethane	6	6
Xylenes	1	1
1,1,1-Trichloroethane	1	1
1,1,2,2-Tetrachloroethane	1	1
1,2-Dichlorobenzene	5	5
1,2-Dichloropropane	2	2
1,3-Dichlorobenzene	1	1
2-Chloronaphthalene	3	4
2-Chlorophenol	4	4
2,4-Dichlorophenol	9	9
2,4-Dinitrophenol	2	2
2,4-Xylenol	5	5
4-Nitrophenol	1	1
4,6-Dinitro-o-cresol	6	6

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3. Larkin, R. J., and B. E. Shoemaker (eds.), "Environmental Assessment Data Systems: Terminology Reference Manual," Acurex Corporation, EPA-600/8-80-011, NTIS No. PB 80-197916, February 1980.
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APPENDIX A

ENVIRONMENTAL ASSESSMENT DATA SYSTEMS MULTIMEDIA REPORT FOR LEDS

The Multimedia Report identifies LEDS Test Series for which sampling and analysis data in other media were taken concurrently and also reported in companion EADS data bases. This summary identifies the true "multimedia" LEDS Test Series.

Test Series Number	Corresponding Multimedia Test Series Numbers		
	<u>FPEIS</u>	<u>GEDS</u>	<u>SDDS</u>
00389	00173	00007	00012
00390	00266	00009	00013
00391	00267	00010	00014
00392	00174	00011	00015
00393	00175	00012	
00394	00171	00017	00016
00395	00179	00018	
00396	00180	00019	
00397	00181	00020	
00398		00028	00021
00399		00029	00022
00401	00168	00031	00023
00402		00032	00024
00403	00191	00033	
00404	00192	00034	
00405	00198	00038	
00406		00044	
00407		00045	
00408		00046	
00414	00292	00055	00009

APPENDIX B

LIQUID EFFLUENTS DATA SYSTEM
TEST SERIES SOURCE
SUMMARY

PRINT-005

ENVIRONMENTAL ASSESSMENT DATA SYSTEMS
TEST SERIES SOURCE SUMMARY

PAGE: 001
DATE: 04/27/83

DATA BASE: LIDS

WHERE CLAUSE FOLLOWS:
WH C355 LT 01/01/83

TEST SERIES NUMBER	SOURCE CATEGORY	SOURCE TYPE	PRODUCT/ DEVICE	PROCESS TYPE	FEED MATERIAL CATEGORY	NUMBER OF SAMPLES
00001	CHEMICAL MANUFAC	SURFACE COATING	PAINTS	LATEX PAINT MFG	NOT SPECIFD	3
00002	CHEMICAL MANUFAC	SURFACE COATING	PAINTS	LATEX PAINT MFG	NOT SPECIFD	3
00003	CHEMICAL MANUFAC	SURFACE COATING	PAINTS	LATEX PAINT MFG	NOT SPECIFD	3
00004	CHEMICAL MANUFAC	SURFACE COATING	PAINTS	OIL PAINT MFG	NOT SPECIFD	3
00005	CHEMICAL MANUFAC	SURFACE COATING	PAINTS	LATEX PAINT MFG	NOT SPECIFD	3
00006	CHEMICAL MANUFAC	SURFACE COATING	PAINTS	LATEX PAINT MFG	NOT SPECIFD	3
00007	CHEMICAL MANUFAC	SURFACE COATING	PAINTS	LATEX PAINT MFG	NOT SPECIFD	3
00008	CHEMICAL MANUFAC	SURFACE COATING	PAINTS	LATEX PAINT MFG	NOT SPECIFD	3
00009	CHEMICAL MANUFAC	SURFACE COATING	PAINTS	LATEX PAINT MFG	NOT SPECIFD	3
00010	CHEMICAL MANUFAC	SURFACE COATING	PAINTS	LATEX PAINT MFG	NOT SPECIFD	3
00011	CHEMICAL MANUFAC	SURFACE COATING	PAINTS	LATEX/OIL MIX PAINTS	NOT SPECIFD	3
00012	CHEMICAL MANUFAC	SURFACE COATING	PAINTS	LATEX PAINT MFG	NOT SPECIFD	3
00013	CHEMICAL MANUFAC	SURFACE COATING	PAINTS	LATEX PAINT MFG	NOT SPECIFD	3
00014	CHEMICAL MANUFAC	SURFACE COATING	PAINTS	OIL PAINT MFG	NOT SPECIFD	3
00015	CHEMICAL MANUFAC	GUM & WOOD	OILS	EXTRACTION/FRACTION	NOT SPECIFD	3
00017	CHEMICAL MANUFAC	PHARMACEUTICALS	NOT SPECIFIED	NOT SPECIFIED	NOT SPECIFD	2
00018	CHEMICAL MANUFAC	GUM & WOOD	OILS	EXTRACTION/FRACTION	NOT SPECIFD	2
00019	CHEMICAL MANUFAC	PHARMACEUTICALS	NOT SPECIFIED	NOT SPECIFIED	NOT SPECIFD	2
00020	CHEMICAL MANUFAC	PHARMACEUTICALS	NOT SPECIFIED	NOT SPECIFIED	NOT SPECIFD	2
00021	CHEMICAL MANUFAC	GUM & WOOD	OILS	EXTRACTION/FRACTION	NOT SPECIFD	2
00022	CHEMICAL MANUFAC	PHARMACEUTICALS	NOT SPECIFIED	NOT SPECIFIED	NOT SPECIFD	2
00023	CHEMICAL MANUFAC	GUM & WOOD	OILS	EXTRACTION/FRACTION	NOT SPECIFD	2
00024	CHEMICAL MANUFAC	PHARMACEUTICALS	NOT SPECIFIED	NOT SPECIFIED	NOT SPECIFD	2
00025	CHEMICAL MANUFAC	PHARMACEUTICALS	NOT SPECIFIED	NOT SPECIFIED	NOT SPECIFD	2
00026	CHEMICAL MANUFAC	PHARMACEUTICALS	NOT SPECIFIED	NOT SPECIFIED	NOT SPECIFD	2
00027	CHEMICAL MANUFAC	PHARMACEUTICALS	NOT SPECIFIED	NOT SPECIFIED	NOT SPECIFD	2
00028	CHEMICAL MANUFAC	PHARMACEUTICALS	NOT SPECIFIED	NOT SPECIFIED	NOT SPECIFD	2
00029	CHEMICAL MANUFAC	GUM & WOOD	OILS	EXTRACTION/FRACTION	NOT SPECIFD	3
00031	METAL MINING	ORE MINE & DRESSING	COPPER	MINE/MILL	NOT SPECIFD	2
00032	METAL MINING	ORE MINE & DRESSING	COPPER	MINE/MILL	NOT SPECIFD	2
00033	METAL MINING	ORE MINE & DRESSING	LEAD/ZINC	MINE/MILL	NOT SPECIFD	3
00034	METAL MINING	ORE MINE & DRESSING	LEAD	MINE/MILL	NOT SPECIFD	4
00035	METAL MINING	ORE MINE & DRESSING	IRON	MINE	NOT SPECIFD	4
00036	METAL MINING	ORE MINE & DRESSING	IRON	MINE/MILL	NOT SPECIFD	2
00037	METAL MINING	ORE MINE & DRESSING	LEAD/ZINC	MINE/MILL	NOT SPECIFD	2
00039	METAL MINING	ORE MINE & DRESSING	FERROALLOY	MINE/MILL	NOT SPECIFD	2
00040	METAL MINING	ORE MINE & DRESSING	LEAD/ZINC	MINE/MILL	NOT SPECIFD	3
00042	METAL MINING	ORE MINE & DRESSING	SILVER	MINE/MILL	NOT SPECIFD	2
00043	METAL MINING	ORE MINE & DRESSING	TITANIUM	MINE/MILL	NOT SPECIFD	2
00044	METAL MINING	ORE MINE & DRESSING	URANIUM	MINE/MILL	NOT SPECIFD	4
00045	METAL MINING	ORE MINE & DRESSING	BAUXITE	HILL	NOT SPECIFD	3
00046	METAL MINING	ORE MINE & DRESSING	FERROALLOY	MINE/MILL	NOT SPECIFD	2

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ENVIRONMENTAL ASSESSMENT DATA SYSTEMS
TEST SERIES SOURCE SUMMARY

PAGE: 002
DATE: 04/27/83

DATA BASE: LEDS

WHERE CLAUSE FOLLOWS:
UN C355 LT 01/01/83

TEST SERIES NUMBER	SOURCE CATEGORY	SOURCE TYPE	PRODUCT/ DEVICE	PROCESS TYPE	FEED MATERIAL CATEGORY	NUMBER OF SAMPLES
00047	METAL MINING	ORE MINE & DRESSING	FERROALLOY	MINE/MILL	NOT SPEC'D	3
00049	METAL MINING	ORE MINE & DRESSING	URANIUM	MINE	NOT SPEC'D	2
00050	METAL MINING	ORE MINE & DRESSING	URANIUM	MINE	NOT SPEC'D	2
00052	CHEMICAL MANUFAC	SYNTHETIC RUBBER	MISC PRODUCTS	POLYMERIZATION PROC	NOT SPEC'D	2
00053	CHEMICAL MANUFAC	SYNTHETIC RUBBER	MISC PRODUCTS	POLYMERIZATION PROC	NOT SPEC'D	2
00055	CHEMICAL MANUFAC	SYNTHETIC RUBBER	MISC PRODUCTS	POLYMERIZATION PROC	NOT SPEC'D	2
00056	CHEMICAL MANUFAC	SYNTHETIC RUBBER	MISC PRODUCTS	POLYMERIZATION PROC	NOT SPEC'D	2
00057	CHEMICAL MANUFAC	SYNTHETIC RUBBER	MISC PRODUCTS	POLYMERIZATION PROC	NOT SPEC'D	2
00058	TEXTILES & PRODUCTS	DYEING & FINISHING	WOOL	FINISHING	NOT SPEC'D	2
00059	TEXTILES & PRODUCTS	DYEING & FINISHING	BLENDED FABRIC	FINISHING	NOT SPEC'D	2
00060	TEXTILES & PRODUCTS	DYEING & FINISHING	BLENDED FABRIC	FINISHING	NOT SPEC'D	2
00061	TEXTILES & PRODUCTS	DYEING & FINISHING	POLYESTER FABRIC	FINISHING	NOT SPEC'D	2
00062	TEXTILES & PRODUCTS	DYEING & FINISHING	BLENDED FABRIC	FINISHING	NOT SPEC'D	2
00063	TEXTILES & PRODUCTS	DYEING & FINISHING	BLENDED FABRIC	FINISHING	NOT SPEC'D	2
00064	TEXTILES & PRODUCTS	DYEING & FINISHING	BLENDED FABRIC	FINISHING	NOT SPEC'D	2
00065	TEXTILES & PRODUCTS	DYEING & FINISHING	BLENDED FABRIC	FINISHING	NOT SPEC'D	2
00066	TEXTILES & PRODUCTS	DYEING & FINISHING	POLYESTER FABRIC	FINISHING	NOT SPEC'D	2
00067	TEXTILES & PRODUCTS	DYEING & FINISHING	BLENDED FABRIC	FINISHING	NOT SPEC'D	2
00068	TEXTILES & PRODUCTS	DYEING & FINISHING	BLENDED FABRIC	FINISHING	NOT SPEC'D	2
00069	TEXTILES & PRODUCTS	DYEING & FINISHING	BLENDED FABRIC	FINISHING	NOT SPEC'D	2
00070	TEXTILES & PRODUCTS	DYEING & FINISHING	BLENDED FABRIC	FINISHING	NOT SPEC'D	2
00071	TEXTILES & PRODUCTS	DYEING & FINISHING	BLENDED FABRIC	FINISHING	NOT SPEC'D	2
00072	TEXTILES & PRODUCTS	DYEING & FINISHING	BLENDED FABRIC	FINISHING	NOT SPEC'D	2
00073	METALS	PRIMARY NONFERROUS	ALUMINUM	FOUNDRY/CASTING	NOT SPEC'D	2
00074	METALS	PRIMARY NONFERROUS	ALUMINUM	FOUNDRY/CASTING	NOT SPEC'D	2
00075	METALS	PRIMARY NONFERROUS	COPPER	FOUNDRY/CASTING	NOT SPEC'D	2
00076	METALS	PRIMARY FERROUS	IRON	FOUNDRY/CASTING	NOT SPEC'D	2
00077	METALS	PRIMARY FERROUS	IRON	FOUNDRY/CASTING	NOT SPEC'D	4
00078	METALS	PRIMARY FERROUS	IRON	FOUNDRY/CASTING	NOT SPEC'D	2
00079	METALS	PRIMARY FERROUS	IRON	FOUNDRY/CASTING	NOT SPEC'D	2
00080	METALS	PRIMARY FERROUS	IRON	FOUNDRY/CASTING	NOT SPEC'D	2
00081	METALS	PRIMARY FERROUS	IRON	FOUNDRY/CASTING	NOT SPEC'D	2
00082	METALS	PRIMARY FERROUS	IRON	FOUNDRY/CASTING	NOT SPEC'D	4
00083	CONSUMER SERVICES	LAUNDRIES	OTHER	INDUSTRIAL	NOT SPEC'D	2
00084	CONSUMER SERVICES	LAUNDRIES	OTHER	INDUSTRIAL	NOT SPEC'D	2
00085	CONSUMER SERVICES	LAUNDRIES	OTHER	INDUSTRIAL	NOT SPEC'D	2
00086	CONSUMER SERVICES	LAUNDRIES	OTHER	INDUSTRIAL	NOT SPEC'D	2
00087	CONSUMER SERVICES	LAUNDRIES	OTHER	INDUSTRIAL	NOT SPEC'D	2
00088	CONSUMER SERVICES	LAUNDRIES	OTHER	INDUSTRIAL	NOT SPEC'D	2
00089	CONSUMER SERVICES	LAUNDRIES	OTHER	INDUSTRIAL	NOT SPEC'D	2
00090	CONSUMER SERVICES	LAUNDRIES	OTHER	INDUSTRIAL	NOT SPEC'D	2
00091	CONSUMER SERVICES	LAUNDRIES	OTHER	INDUSTRIAL	NOT SPEC'D	2

DATA BASE: LEADS

WHERE CLAUSE FOLLOWS:
UN C355 LY 01/01/83

TEST SERIES NUMBER	SOURCE CATEGORY	SOURCE TYPE	PRODUCT/ DEVICE	PROCESS TYPE	FEED MATERIAL CATEGORY	NUMBER OF SAMPLES
00092	CONSUMER SERVICES	LAUNDRIES	OTHER	COMMERCIAL	NOT SPEC'D	4
00093	CONSUMER SERVICES	LAUNDRIES	OTHER	COMMERCIAL	NOT SPEC'D	4
00094	CONSUMER SERVICES	LAUNDRIES	OTHER	INDUSTRIAL	NOT SPEC'D	9
00095	CONSUMER SERVICES	LAUNDRIES	OTHER	COMMERCIAL	NOT SPEC'D	9
00096	CONSUMER SERVICES	LAUNDRIES	OTHER	INDUSTRIAL	NOT SPEC'D	7
00097	CONSUMER SERVICES	LAUNDRIES	AUTOMOBILES	WAND	NOT SPEC'D	3
00098	CONSUMER SERVICES	LAUNDRIES	AUTOMOBILES	WAND	NOT SPEC'D	4
00100	CONSUMER SERVICES	LAUNDRIES	AUTOMOBILES	TUNNEL	NOT SPEC'D	4
00101	CONSUMER SERVICES	LAUNDRIES	AUTOMOBILES	ROLLOVER	NOT SPEC'D	4
00102	CONSUMER SERVICES	LAUNDRIES	AUTOMOBILES	ROLLOVER	NOT SPEC'D	3
00103	COAL MINING	MISC COALS	NOT SPECIFIED	MINING	NOT SPEC'D	4
00104	COAL MINING	MISC COALS	NOT SPECIFIED	MINING	NOT SPEC'D	4
00105	COAL MINING	BITUMINOUS & LIGNITE	BITUMINOUS	PHYS-MECH CLEANING	NOT SPEC'D	2
00106	COAL MINING	BITUMINOUS & LIGNITE	BITUMINOUS	PHYS-MECH CLEANING	NOT SPEC'D	2
00107	COAL MINING	BITUMINOUS & LIGNITE	BITUMINOUS	PHYS-MECH CLEANING	NOT SPEC'D	2
00108	COAL MINING	MISC COALS	NOT SPECIFIED	MINING	NOT SPEC'D	2
00109	COAL MINING	MISC COALS	NOT SPECIFIED	MINING	NOT SPEC'D	2
00110	COAL MINING	MISC COALS	NOT SPECIFIED	MINING	NOT SPEC'D	2
00111	COAL MINING	MISC COALS	NOT SPECIFIED	MINING	NOT SPEC'D	2
00112	COAL MINING	MISC COALS	NOT SPECIFIED	MINING	NOT SPEC'D	3
00113	METALS	PRIMARY FERROUS	STEEL	BASIC OXYGEN FURNACE	NOT SPEC'D	2
00114	METALS	PRIMARY FERROUS	STEEL	BASIC OXYGEN FURNACE	NOT SPEC'D	2
00115	METALS	PRIMARY FERROUS	STEEL	BASIC OXYGEN FURNACE	NOT SPEC'D	2
00116	METALS	PRIMARY FERROUS	STEEL	BASIC OXYGEN FURNACE	NOT SPEC'D	2
00117	METALS	PRIMARY FERROUS	STEEL	BASIC OXYGEN FURNACE	NOT SPEC'D	2
00118	METALS	PRIMARY FERROUS	STEEL	BASIC OXYGEN FURNACE	NOT SPEC'D	2
00119	METALS	PRIMARY FERROUS	STEEL	BASIC OXYGEN FURNACE	NOT SPEC'D	2
00120	METALS	PRIMARY FERROUS	STEEL	ELECTRIC ARC FURNACE	NOT SPEC'D	2
00121	METALS	PRIMARY FERROUS	STEEL	ELECTRIC ARC FURNACE	NOT SPEC'D	2
00122	METALS	PRIMARY FERROUS	STEEL	ELECTRIC ARC FURNACE	NOT SPEC'D	2
00123	METALS	PRIMARY FERROUS	STEEL	COLD ROLLING	NOT SPEC'D	2
00124	METALS	PRIMARY FERROUS	STEEL	COLD ROLLING	NOT SPEC'D	2
00125	METALS	PRIMARY FERROUS	STEEL	COLD ROLLING	NOT SPEC'D	2
00126	METALS	PRIMARY FERROUS	STEEL	HOT COATING	NOT SPEC'D	2
00127	METALS	PRIMARY FERROUS	STEEL	HOT COATING	NOT SPEC'D	2
00128	METALS	PRIMARY FERROUS	STEEL	HOT COATING	NOT SPEC'D	2
00130	METALS	PRIMARY FERROUS	COKE	COKE OVEN	NOT SPEC'D	2
00131	METALS	PRIMARY FERROUS	STEEL	ALKALINE CLEANING	NOT SPEC'D	2
00132	METALS	PRIMARY FERROUS	STEEL	ALKALINE CLEANING	NOT SPEC'D	2
00133	METALS	PRIMARY FERROUS	STEEL	ALKALINE CLEANING	NOT SPEC'D	2
00134	METALS	PRIMARY FERROUS	STEEL	OPEN HEARTH	NOT SPEC'D	2
00135	METALS	PRIMARY FERROUS	STEEL	HOT FORMING	NOT SPEC'D	2

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ENVIRONMENTAL ASSESSMENT DATA SYSTEMS
TEST SERIES SOURCE SUMMARY

PAGE: 004
DATE: 04/27/83

DATA BASE: LEDS

WHERE CLAUSE FOLLOWS:
WH C355 LT 01/01/83

TEST SERIES NUMBER	SOURCE CATEGORY	SOURCE TYPE	PRODUCT/ DEVICE	PROCESS TYPE	FEED MATERIAL CATEGORY	NUMBER OF SAMPLES
00136	METALS	PRIMARY FERROUS	STEEL	NOT FORMING	NOT SPECIFD	2
00137	METALS	PRIMARY FERROUS	STEEL	OPEN HEARTH	NOT SPECIFD	2
00138	METALS	PRIMARY FERROUS	STEEL	SINTERING	NOT SPECIFD	2
00139	METALS	PRIMARY FERROUS	IRON	SINTERING	NOT SPECIFD	2
00140	METALS	PRIMARY FERROUS	IRON	SINTERING	NOT SPECIFD	2
00141	METALS	PRIMARY FERROUS	STEEL	VACUUM DEGASSING	NOT SPECIFD	2
00142	METALS	PRIMARY FERROUS	STEEL	VACUUM DEGASSING	NOT SPECIFD	2
00143	METALS	PRIMARY FERROUS	STEEL	PIPE & TUBE PROD	NOT SPECIFD	2
00144	METALS	PRIMARY FERROUS	STEEL	SCARFING	NOT SPECIFD	2
00145	METALS	PRIMARY FERROUS	STEEL	SCARFING	NOT SPECIFD	4
00146	METALS	PRIMARY FERROUS	STEEL	SCARFING	NOT SPECIFD	2
00147	METALS	PRIMARY FERROUS	STEEL	SCARFING	NOT SPECIFD	2
00148	LEATHER PRODUCTS	TANNING/FINISHING	CURED LEATHER GOODS	NOT SPECIFIED	NOT SPECIFD	2
00149	LEATHER PRODUCTS	TANNING/FINISHING	CURED LEATHER GOODS	NOT SPECIFIED	NOT SPECIFD	2
00150	LEATHER PRODUCTS	TANNING/FINISHING	CURED LEATHER GOODS	NOT SPECIFIED	NOT SPECIFD	2
00151	LEATHER PRODUCTS	TANNING/FINISHING	CURED LEATHER GOODS	NOT SPECIFIED	NOT SPECIFD	2
00152	LEATHER PRODUCTS	TANNING/FINISHING	CURED LEATHER GOODS	NOT SPECIFIED	NOT SPECIFD	2
00153	LEATHER PRODUCTS	TANNING/FINISHING	CURED LEATHER GOODS	NOT SPECIFIED	NOT SPECIFD	2
00154	LEATHER PRODUCTS	TANNING/FINISHING	CURED LEATHER GOODS	NOT SPECIFIED	NOT SPECIFD	2
00155	FABRICATED MTL PROD	METAL PRODUCTS	APPLIANCES	SURFACE COATING	NOT SPECIFD	2
00156	FABRICATED MTL PROD	METAL PRODUCTS	APPLIANCES	SURFACE COATING	NOT SPECIFD	2
00157	FABRICATED MTL PROD	METAL PRODUCTS	APPLIANCES	SURFACE COATING	NOT SPECIFD	2
00158	FABRICATED MTL PROD	METAL PRODUCTS	APPLIANCES	SURFACE COATING	NOT SPECIFD	2
00159	FABRICATED MTL PROD	METAL PRODUCTS	APPLIANCES	SURFACE COATING	NOT SPECIFD	2
00160	FABRICATED MTL PROD	METAL PRODUCTS	APPLIANCES	SURFACE COATING	NOT SPECIFD	2
00161	FABRICATED MTL PROD	METAL PRODUCTS	APPLIANCES	SURFACE COATING	NOT SPECIFD	2
00162	METALS	PRIMARY FERROUS	STEEL	COATING	NOT SPECIFD	2
00163	METALS	PRIMARY FERROUS	STEEL	COATING	NOT SPECIFD	2
00164	METALS	PRIMARY FERROUS	STEEL	COATING	NOT SPECIFD	2
00165	METALS	PRIMARY FERROUS	STEEL	COATING	NOT SPECIFD	2
00188	COMBUST-ENERGY	INDUSTRIAL	GASIFICATION	ENTRAINED BED	COAL	2
00189	COMBUST-ENERGY	UTILITY	BOILER	SINGLE WALL	COAL	2
00190	COMBUST-ENERGY	UTILITY	BOILER	TANGENTIAL	COAL	2
00191	COMBUST-ENERGY	UTILITY	BOILER	SINGLE WALL	COAL	2
00192	COMBUST-ENERGY	UTILITY	BOILER	CYCLONE	COAL	2
00193	COMBUST-ENERGY	UTILITY	BOILER	CYCLONE	COAL	2
00194	COMBUST-ENERGY	UTILITY	BOILER	CYCLONE	COAL	2
00195	COMBUST-ENERGY	UTILITY	BOILER	CYCLONE	COAL	2
00196	COMBUST-ENERGY	UTILITY	BOILER	CYCLONE	COAL	2
00197	COMBUST-ENERGY	UTILITY	BOILER	CYCLONE	COAL	2
00198	COMBUST-ENERGY	UTILITY	BOILER	CYCLONE	COAL	2
00199	COMBUST-ENERGY	UTILITY	BOILER	CYCLONE	COAL	2
00400	COMBUST-ENERGY	COMMERCIAL-INST	INCINERATORS	MULTIPLE CHAMBER	MIXED FUEL	2

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ENVIRONMENTAL ASSESSMENT DATA SYSTEMS
TEST SERIES SOURCE SUMMARY

PRINT-005

DATA BASE: LEDS

WHERE CLAUSE FOLLOWS:
WH C355 LY 01/01/83

TEST SERIES NUMBER	SOURCE CATEGORY	SOURCE TYPE	PRODUCT/ DEVICE	PROCESS TYPE	FEED MATERIAL CATEGORY	NUMBER OF SAMPLES
00401	COMBUST-ENERGY	UTILITY	BOILER	STOKER	COAL	1
00402	COMBUST-ENERGY	UTILITY	BOILER	TANGENTIAL	COAL	1
00403	COMBUST-ENERGY	UTILITY	BOILER	TANGENTIAL	OIL	2
00404	COMBUST-ENERGY	UTILITY	BOILER	SINGLE WALL	OIL	1
00405	COMBUST-ENERGY	UTILITY	BOILER	TANGENTIAL	GAS	1
00406	COMBUST-ENERGY	UTILITY	BOILER	TANGENTIAL	GAS	1
00407	COMBUST-ENERGY	UTILITY	BOILER	TANGENTIAL	GAS	1
00408	COMBUST-ENERGY	UTILITY	BOILER	TANGENTIAL	GAS	1
00414	COMBUST-ENERGY	UTILITY	BOILER	HORIZ OFFUSED WALL	COAL	3